This was before the "spring reverb" system had been developed, but resourceful Lee obtained reverb by placing auxiliary speakers in tiled mens' rooms, while diverting often frenzied visitors to other johns. The tour ended at the New York Roxy, where Jesse and Helen entertained large audiences at Hammonds which sounded much different from the home variety, thanks to the improvisational ability of Lee Haggart.

Many years later, Crawford spoke well of Haggart, "I couldn't have gotten along without him."

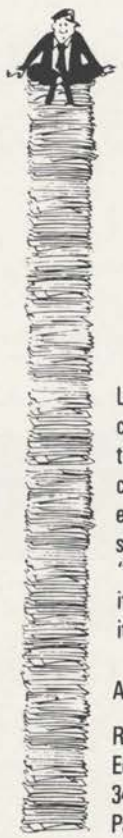
As Lee Haggart's electronic skills developed, he became a part of the electronics postwar boom in California's San Fernando Valley. The writer first encountered Lee when he was assigned to the next technicians' bench at Bendix Electronics in North Hollywood in 1954. Lee's conversation was spiked with organ terminology, so a bond developed. Lee later moved over to Lockheed as a full-fledged electronics engineer. It was a matter of self-education over the concern so many employers have for college diplomas. Lee made it on his own.

During his retirement years, Lee's home and shop were the mecca for organ buffs in need of advice, service, parts or just a jaw session about organs. He took on many projects, one involving a 16' pedal rank for George Wright's studio organ. And he put together an arresting 16' octave of Posthorns for John Ledwon's 3/24 studio Wurlitzer which have that ideal rasp created by a small boy scraping a barrel stave down the side of a clapboarded house.

In his late sixties Lee married organphile Laurel Ruby, following a courtship of only ten days. It was a second marriage for both, Lee having grown children from his first marriage which ended many years ago. Lee adopted Laurel's two teenage boys and a girl and helped raise them as his own during the period he lived in Granada Hills, California.

In deteriorating health Lee moved to Twin Falls, Idaho, with Laurel, in December, 1976, to escape the smog conditions of Los Angeles. He planned to write a book entitled "The Men Who Were Hope-Jones," a story about the many organ technicians who contributed to the Robert Hope-Jones legend.

But the marriage ended and Lee moved to Porterville, California, in retirement. There he kept his hand in by doing some voicing for Dick Villemen's organ fabrication and repair facility there. He broke his hip in a fall and had to have a replacement operation. He had suffered from a heart condition for many years and that was the probable cause of his death on February 15, 1982. He was 77. □



the letters to the editors

Letters to the Editor concerning all aspects of the theatre organ hobby are encouraged. Send them to the editor concerned. Unless it's stated clearly on the letter "not for publication," the editors feel free to reproduce it, in whole or part.

Address:

Robert M. Gilbert
Editor
3448 Cowper Court
Palo Alto, Calif. 94306

Dear Sir:

After reading letters concerning recording of concerts, I offer an idea which has proved very successful for the Rochester Theatre Organ Society.

When an artist is engaged for a concert, he is sent a questionnaire which asks him if he will allow recording. If he does, mention of this is made in our newsletter. Those desiring to record are requested to set up their equipment at least a half hour before concert time in an alcove off the upper balcony lobby, far removed from the audience. We have a central system of outlets which can handle upwards of 20 tape recorders on a first-come, first-served basis.

Should the artist state "no recording," this is also mentioned in our newsletter, and the audience is policed by ushers for possible violations. Recorders are surrendered to us for the duration of the concert or their owners told to remove them to their cars.

Many installations may not have the setup for such a system, but in a nearby room, separated by a wall to obviate noise, one could be installed. Any good electrician can give advice as to costs, materials, etc.

It must be emphasized that the overwhelming majority of concert attendees come to listen. It is they who should be spared extraneous noises which are unavoidable in the recording procedure.

Lloyd E. Klos,
Secretary, RTOS

Dear Sir:

Referring to Ron Musselman's article, "Theatre Organ in Stereo," Aug./Sept./Oct. THEATRE ORGAN:

Mr. Musselman discusses at length why cassette tape recorders should not be permitted at theatre organ concerts. He then continues in detail as to which cassette recorders are the best to buy for good theatre tapes, including results of theatre organs he has taped. Why an article at all?

Mr. Harrison's solution to non-annoying recording in the Nov./Dec. issue is a good one. My idea of silent taping is to use a hand-held condenser mike with an On-Off switch. Flip the switch to "Off" and set the cassette tape recorder to its usual record mode before the concert. When recording simply flip the switch to "On." There is absolutely no audible sound.

For stereo, one of the new condenser mikes with two adjustable swivel heads works very well. Mr. Harrison's suggestion about using ninety-minute tapes and turning the tape over at intermission only is essential.

Imagine a vacation area posting signs which read "No photography permitted, it cuts the postcard sales." Unrealistic? Well, aren't a few of the theatre organ concert artists doing just that? In addition to my taping, I have always purchased all of the records available of the artist in concert.

Now, the other side of the coin. Suppose we were not interested in recording. What is to be done about people who talk continually, rattle popcorn bags, hum, flick the corner of their programs and even kick the

back of your seat? This is permitted, I suppose.

I think it is time to stop all this recording fuss and learn to be ladies and gentlemen and extend to *every* patron of a theatre organ concert the courtesy to which we are *all* entitled.

Yours truly,
Lyman Nellis

Dear Mr. Gilbert:

The beautiful article by Lloyd Klos which you published about my Dan was a joy; it brought me many smiles and several tears. I only wish all those beautiful things could be said to Dan himself. If he could see what you published that others have said, he would be as proud as I am. I hope you understand how much this means to me.

Through the Letters to the Editor column, I would like to publicly thank all those who spoke so nicely. Of course my first thanks are to Mr. Klos who did all the compiling, interviewing and writing, but I also wish to include my deep thanks to Don Baker, Clealan Blakely, Mike Coup, Bill Floyd, Dick Loderhose, Bob Mack and Billy Nalle. I have known all these wonderful people for many years.

Since I live in Wichita now, I am once more near what I privately think of as Dan's organ, and I hear it quite a bit. The Wichita Theatre Organ people shower me with their wonderful warm feelings, and made me a part of their "family." I go to all the concerts, hear all the beautiful music, and talk to old friends of the Paramount when they come here. I am comfortable in a nice apartment, my doctor just gave me a clean bill of health, and I am doing the best I can.

Sincerely yours,
Theresa Papp □

THE ACOUSTICAL CONSULTANT

Limitations of Sound Level Meters and the Accurate Measurement of Transients

by R.J. Weisenberger

As any audiophile knows, any amplifier can be driven into clipping (peak overload distortion) long before delivering its rated continuous rms power. This is understandable from the fact that rms measurements are based on the continuous flow of power to a load, such as obtained when using pure sine-wave test tones from an audio generator.

In a well-designed amplifier, the peak-to-peak output voltage capability into a given load should not vary significantly regardless of the waveform, provided there are equal amounts of positive and negative components in the waveform. Thus, signals of an instantaneous nature, known as transients, will yield very low readings when measured by the continuous power method, even if their peak-to-peak values are measured as identical.

Standard AC voltmeters respond to average or rms values, and even so-called peak-reading meters (such as the standard VU meter) cannot respond fast enough to accurately measure the transient levels often found in musical material.

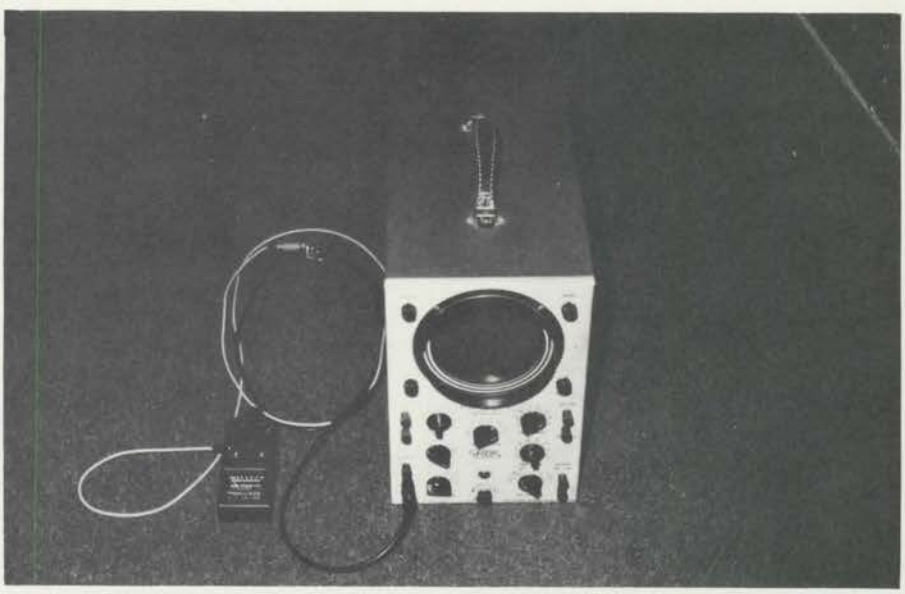
The importance of achieving greater accuracy in the measurement of transient levels, as well as continuous levels, has resulted in several well-known amplifier manufacturers developing LED (light-emitting diode) and fluorescent VU meters and power indicator displays.

Such displays, lacking the ballistic limitations of conventional meter movements, can respond instantly to all types of signals, whether of a continuous or transient nature, their resolution being limited only by the number of segments per display.

Amplifiers equipped with such monitoring devices can produce clean, high-level sound without clipping, because the levels of even the briefest transients can be monitored and the gain can be set so that such levels are still below the clipping point. *How does this apply to the pipe organ?*

When measuring sound levels produced by musical instruments, particularly those of percussions, a sound level meter in itself will prove inadequate, for it can measure only sustained sound levels of a fairly simple nature, not those produced in a theatre pipe organ by the striking of wood blocks, metal bars, etc. However, most sound level meters are equipped with an output jack, allowing the meter to be patched into other test equipment for further analysis.

By feeding the output of a sound level meter into a properly calibrated oscilloscope, one can accurately measure transient levels, and with the use of a storage 'scope the tran-



A simple sound level meter/oscilloscope combination — the least equipment necessary for basic audio research. Those involved in the design and voicing of organ pipes should familiarize themselves with the operation and use of such equipment.